Emergency Surgery In Pregnancy Isn't the Catastrophe We Fear: Outcomes After 55 Emergent Non-Obstetric Cases

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Background:

- Incidence of non-obstetric surgery in pregnancy as high as 2%[1,2]
- Analyses of anesthetic practices lacking
- We investigated management and outcomes in our academic medical system
  - 1 quaternary center
  - 1 tertiary center
  - Multiple community hospitals

Hypothesis:

- We anticipated variability in management
- We anticipated generally favorable outcomes

Methods:

- All pregnant patients who underwent non-obstetric surgeries from 2015 to 2024 included
- Emergent surgery defined as needing to start within one hour of booking
- Manual review of EMR records

Brigham and Women's Hospital
Founding Member, Mass General Brigham

1. Balinskaite et al. Annals of Surgery 2017
2. Ní Mhuireachtaigh et al. Journal of Clinical Anesthesia 2006

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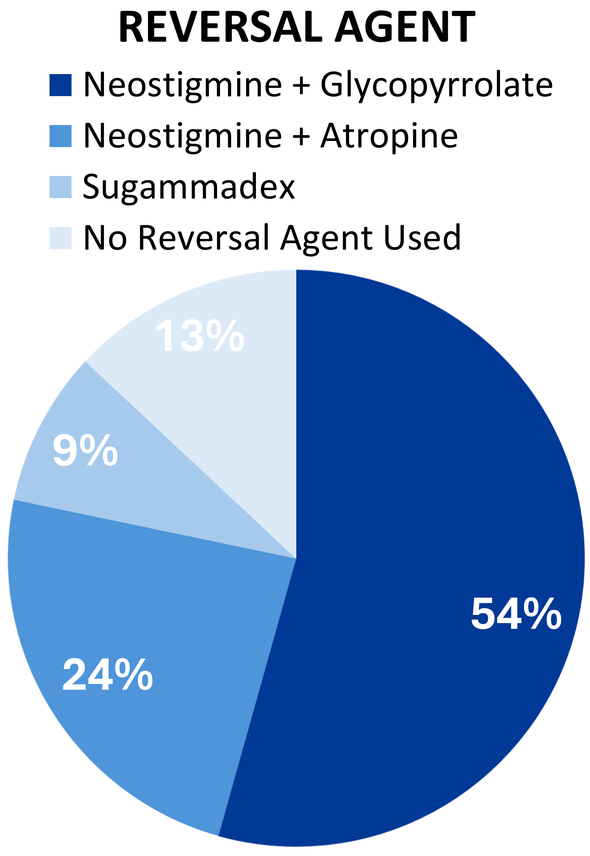
Results – Surgical Indications and Anesthetic Management

- 2,009 procedures on pregnant patients
- 55 cases in 54 unique patients were emergent
- Of GA cases with ETT:
  - 85% utilized RSI technique
  - 49% used video laryngoscopy
  - 89% utilized volatile anesthesia

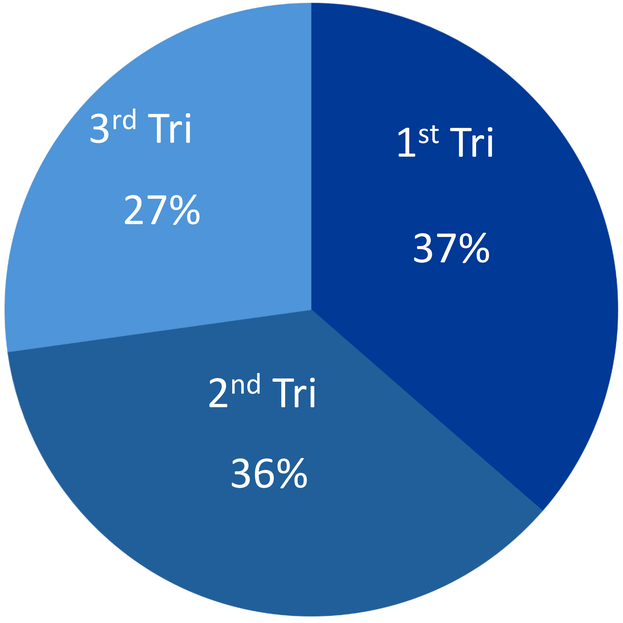
Surgical/Anesthetic Characteristics		
Indication for Surgery		
	Ovarian Torsion	45.5% (n=25)
	Appendicitis	25.5% (n= 14)
	Bowel Obstruction	14.5% (n=8)
	Obstructing Nephrolithiasis*	5.5% (n=3)
	Hemorrhagic Adnexal Mass	3.6% (n=2)
	Cholecystitis	1.8% (n=1)
	Multi-Pressor Shock Requiring Exploratory Laparotomy	1.8% (n=1)
	Soft Tissue Infection†	1.8% (n=1)
Anesthetic Type		
	General (ETT)	96.4% (n=53)
	General (LMA)	0% (n=0)
	MAC†	1.8% (n=1)
	Neuraxial*	1.8% (n=1)



Results – Obstetric/Neonatal Outcomes

- 24% of cases utilized intraoperative fetal monitoring
  - 77% were continuous
- No intraoperative cesareans
- All patients went on to have live births
- 24% delivered preterm neonates
  - None were previable

SURGERY TIMING BY TRIMESTER



Obstetric/Neonatal Outcomes		
Live Birth		100% (n=54)
Median Gestational Age at Time of Delivery (Weeks)		38.9 (IQR 36.9-39.6)
Delivery Type		
	Vaginal	75.9% (n=41)
	Primary Cesarean	20.4% (n=11)
	Repeat Cesarean	3.7% (n=2)
Median Apgar at 1 Minute		8
Median Apgar at 5 Minutes		9

Discussion

- Not a catastrophe
- Need for intraoperatrive cesarean rare
- No perioperative maternal or fetal mortality
- Further research warranted to determine best practices
  - Does FHR monitoring guide anesthetic?
  - Is previable FHR monitoring warranted?
  - Is Sugammadex safe?